IN THE SPECIFICATION:

In the paragraph on page 1, line 3 through page 1, line 5:

This patent application is a divisional application of U.S. Patent Application 09/980,891, filed December 3, 2001, which is a continuation application of PCT/JP01/02910 filed on April 4, 2001, further of a Japanese patent application, 2000-101867 filed April 4, 2000, the contents of which are incorporated herein by reference.

In the paragraph on page 68, line 21 through page 70, line 14:

Here, v(-) and v (+) indicate the initial and final value of the voltage of the condenser 402, respectively. Therefore, the integral value $Q_{DDT}$ of the transient power supply current flowing through the circuit under test CUT can be calculated by measuring the difference between the initial and final value of the voltage of the condenser 402. Here, it is preferable that the initial voltage value v(-) of the condenser 402 is measured slightly before the signal transition of the input signal line of the path under test, and the final voltage v(+) of the condenser 402 is measured slightly after the power supply current becomes quiescent power supply current value $I_{DDQ}$ by switching all of the logic gates on the path under test. However, it is difficult to determine the time when power supply current becomes value $I_{DDQ}$, therefore, it is possible to measure the final voltage v(+) of the condenser 402 at the time after a sufficient time passes from the input of the test pattern sequence. The measuring unit 1203 for measuring these voltages v(-) and v (+) may be a digital multimeter, an oscilloscope, or digitizer of the ATE for IC.

In the paragraph on page 69, line 16- page 70, line 21:

Next, the operation of testing semiconductor IC using the transient power supply current tester 102c is described in detail. Fig. 32 illustrates the procedure of the testing method

of the transient power supply current according to the present invention. The test pattern sequence input unit 101 inputs a test pattern sequence activating path under test in step 1301. In step 1302, the integral transient power supply current measuring unit 1002 measures the integral value $Q_{DDT}$ of the power supply current flowing into the power supply pin of the circuit under test CUT from the power supply for a predetermined time period T. Here, T is the time period, for example, from time *(-) slightly before the input transition to the time *(+) until the circuit under test is stabilized sufficiently. Finally, the fault detector 1003 compares, in step 1303, the integral value $Q_{DDT}$ of the transient power supply current obtained by the integral transient power supply current measuring unit 1002 to the predetermined value $Q_{DDT, typ} + {}^*Q$ as shown in equation (39), and determines that "a fault is present" when the comparison result satisfies the condition of fault detection $Q_{DDT} > Q_{DDT, typ} + {}^*Q$ in step 1304, and that "there is no fault" when the comparison result does not satisfy the condition of fault detection $Q_{DDT} > Q_{DDT, typ} + {}^*Q$ in step 1305, and then the process is finished. Here, the power supply 201 supplies a predetermined voltage, for example, 3.3V constantly to the circuit under test CUT through the process of delay fault testing, i.e., the steps 1301, 1302, 1303, 1304, and 1305. The step 1301 of inputting a test pattern sequence and the step 1302 of measuring the integral value of the transient power supply current are preformed nearly at the same time. In the step 1302 of measuring the integral value of the transient power supply current, the value may be measured by single measurement or by the method of taking the average of the results of multiple measurements to measure it more accurately. For single measurement, the test pattern sequence is inputted once, while the test pattern sequence is inputted repeatedly for multiple measurements.